

# DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## AIR QUALITY CONTROL MINOR PERMIT

Permit AQ1227MSS03

Preliminary –August 18, 2011

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ1227MSS03 to the Permittee listed below.

**Operator and Permittee:** Usibelli Coal Mine, Inc.  
634 South Bailey Street, Suite 204  
Palmer, AK 99645

**Owner:** Usibelli Coal Mine, Inc.

**Stationary Source** Wishbone Hill Coal Mining and Processing Operation

**Location:** 8 Miles North of Palmer, AK;  
Latitude 61.7367 and Longitude -148.9514

**Physical Address:** Section 27, T19N, R2E; Seward Meridian

**Permit Contact:** Rob Brown, Project Manager, (907) 745-6028

**Project:** Development of Coal Mining Operations

This permit establishes a new Stationary Source under 18 AAC 50.502(b)(5) for a Coal Preparation Plant and 18 AAC 50.502(c)(1) for Ambient Air Quality Protection. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements except as specified in this permit.

The Permittee may operate under the terms and conditions of this minor permit upon issuance.

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John F. Kuterbach  
Manager, Air Permits Program

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**Section 1. Emission Unit Inventory**

1. **Authorization.** Permittee is authorized to install and operate Emission Unit (EU) ID 1 and 2 listed in Table 1. The Permittee shall notify the Department within seven days of beginning the installation EU ID 1 through EU ID 2. The notification must identify:
  - 1.1 unit number, serial/model number, and rating of the unit;
  - 1.2 installation date of the unit; and
  - 1.3 anticipated startup date of the unit.
  
2. **Emission Unit Inventory.** Permittee is authorized to install and operate the emission units listed in Table 1 as described in this permit. Except as noted elsewhere in the permit, information in Table 1 is for information purposes only. The specific unit descriptions do not restrict the Permittee from replacing an emission unit identified in Table 1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

**Table 1. Emission Unit Inventory**

<b>EU ID</b>	<b>Classification</b>	<b>Description</b>	<b>Type</b>	<b>Capacity</b>	<b>Expected Operation</b>
1	Power Generation	Diesel-Fired Engine	Point	900 hp	8,760 hr/yr
2	Heaters	Diesel-Fired Heaters	Point	10.0 MMBtu/hr	8,760 hr/yr
3	Topsoil Operations	Topsoil Removal and Storage	Fugitive	N/A	2,660 hr/yr
4	Blasting Operations	Overburden Blasting	Fugitive	10,890 ft sq/blast	240 blast/yr
5	Blasting Operations	Coal Blasting	Fugitive	10,890 ft sq/blast	120 blast/yr
6	Overburden	Overburden Truck Loading	Fugitive	15,459,000 cubic yd/yr	10,360,000 tpy
7	Overburden	Overburden Dumping	Fugitive	15,459,000 cubic yd/yr	10,360,000 tpy
8	Coal Mining	Coal Removal	Fugitive	1,815,000 tpy	8,760 hr/yr
9	Coal Mining	Coal Dumping – Crusher Feeder	Fugitive	1,815,000 tpy	8,760 hr/y
10	Coal Mining	Coal Dumping from Run of Mine Pile	Fugitive	605,000 tpy	8,760 hr/yr
11	Coal Mining	Coal Reclaim From Run of Mine Pile	Fugitive	605,000 tpy	8,760 hr/yr
12	Coal Processing	Crusher	Fugitive	350 tph	1,815,000 tpy
13	Coal Processing	Transfer – Crusher to Conveyor	Fugitive	350 tph	1,815,000 tpy
14	Coal Processing	Transfer - Conveyor 1 to Raw Stockpile	Fugitive	350 tph	1,815,000 tpy
15	Coal Processing	Transfer - Raw Stockpile to Conveyor 2	Fugitive	350 tph	1,815,000 tpy
16	Coal Processing	Transfer - Conveyor 2 to Jig Plant	Fugitive	350 tph	1,815,000 tpy
17	Coal Processing	Transfer - Jig Plant to Conveyor 3	Fugitive	350 tph	815,000 tpy
18	Coal Processing	Transfer - Conveyor 3 to Reject	Fugitive	350 tph	815,000 tpy

		Stockpile			
19	Coal Processing	Transfer - Jig Plant to Conveyor 4	Fugitive	350 tph	1,000,000 tpy
20	Coal Processing	Transfer - Conveyor 4 to Clean Stockpile	Fugitive	350 tph	1,000,000 tpy
21	Coal Processing	Transfer - Clean Stockpile to Conveyor 5	Fugitive	350 tph	1,000,000 tpy
22	Coal Processing	Transfer - Conveyor 5 to Loadout Bin	Fugitive	350 tph	1,000,000 tpy
23	Coal Processing	Transfer - Loadout Bin to Truck	Fugitive	350 tph	1,000,000 tpy
24	Wind Erosion	Mine Area	Fugitive	168 acres	8,760 hr/yr
25	Wind Erosion	Run-of-Mine Coal Stockpile	Fugitive	4 acres	8,760 hr/yr
26	Wind Erosion	Raw Coal Stockpile	Fugitive	1.5 acres	8,760 hr/yr
27	Wind Erosion	Clean Coal Stockpile	Fugitive	1.5 acres	8,760 hr/yr
28	Wind Erosion	Reject Stockpile	Fugitive	0.1 acres	8,760 hr/yr
29	Mobile Equipment	Grader Operations	Fugitive	13,122 VMT/yr	8,760 hr/yr
30	Mobile Equipment	Overburden Hauling - Backfill	Fugitive	19,340 VMT/yr	8,760 hr/yr
31	Mobile Equipment	Overburden Hauling - Stockpile	Fugitive	204,517 VMT/yr	8,760 hr/yr
32	Mobile Equipment	Coal Hauling within Mine	Fugitive	14,103 VMT/yr	8,760 hr/yr
33	Mobile Equipment	Misc. Mine Traffic	Fugitive	50,000 VMT/yr	8,760 hr/yr
34	Mobile Equipment	Other Vehicle Traffic	Fugitive	236,520 VMT/yr	8,760 hr/yr
35	Mobile Equipment	Coal Truck Haul – Loop Road	Fugitive	4,140 VMT/Yr	8,760 hr/yr
36	Off Source	Coal Truck Haul - Access Road		101,430 VMT/yr	8,760 hr/yr

## ***Section 2. Ambient Air Quality Protection Conditions***

3. **Public Access Control Plan.** The Permittee shall protect the Annual Average NO<sub>2</sub> and the 24-hour PM-10 ambient air quality standards by establishing and maintaining the ambient air boundaries as follows:
  - 3.1 Comply with the provisions contained in the August 10, 2010 Public Access Control Plan (as provided in Attachment 6), or a subsequent written version approved by the Department that contains at least the following elements:
    - a. a scaled map that clearly shows the ambient air boundaries and warning sign locations;
    - b. ambient boundaries that are consistent with the land owner's authorization to preclude public access from the area within the boundaries;
    - c. defined methods of establishing and maintaining the boundary, such as a fence in easily accessible areas, surveillance and posting of strategically located warning signs (provide size, wording, and inspection/repair schedule) in more difficult to access areas;
    - d. the date of the Public Access Control Plan; and
    - e. the procedure for approaching unauthorized people who have crossed the ambient air boundary.
  - 3.2 Maintain a physical barrier between the public and the industrial site. The areas requiring a physical barrier are the southern and western boundaries.
  - 3.3 Post and maintain all warning signs described in the Public Access Control Plan as follows:
    - a. post all signs as stated in the Public Access Control Plan, no later than the beginning of onsite construction activities;
    - b. use a font, font size and contrast coloring that makes all lettering easy to read;
    - c. inspect and repair the signs according to the schedule described in the Public Access Control Plan; and
    - d. keep all signs free of nearby visible obstructions (including wind-blown snow).
4. **Dust Control Plan.** The Permittee shall protect the 24-hour PM-10 ambient air quality standard by complying with the provisions contained in the Fugitive Dust Control Plan contained in Attachment 4, or a subsequent written version approved by the Department.
  - 4.1 The Permittee shall:

- a. comply with the fugitive dust plan contained in Attachment 4, unless the Permittee has written authorization from the Department to modify the plan in Attachment 4 or submits a new plan for Department approval, and once approved by the Department the Permittee shall operate under the new plan;
  - (i) Plan changes that are more stringent shall not require a public comment period;
  - (ii) Plan changes that are deemed, by the Department, to be less stringent than the ones used to establish the permit, shall at the discretion of the Department, be public noticed under the provisions of 18 AAC 50.542(d)(1)(A) through 18 AAC 50.542(d)(1)(C);
- b. keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities associated with extraction, loading, unloading or transport of coal at or from the stationary source;
  - (i) The records shall include but are not limited to:
    - (A) the date and time that extraction, loading, unloading or transport operations start and stop for each day, if the operations are continuous and unyielding, then the Permittee shall record the operation as continuous for that calendar day;
    - (B) the date and time when each dust control plan item is followed (for the dust control plan items which are appropriate for the activity);
    - (C) and with respect to any extraction, loading, unloading or transport activity which generates dust, the date and time that:
      - (1) dust emissions are first observed,
      - (2) when actions are taken to further mitigate, and what actions were taken, and;
      - (3) if the command to cease activities is given, the time that command was given, and
      - (4) the actual ending of the activity that was generating the dust, and;
      - (5) the time the last visible dust was seen being generated, and;
      - (6) any complaints received, including the date, time, nature of the complaint and actions taken to address the complaint. The Permittee shall complete the complaint form in Attachment 5, for each complaint received, and submit it to the Department per Condition 25, within 30 days of receiving the complaint.

- c. at least once each month, perform visual surveys of fugitive particulate matter sources as follows:
    - (i) Conduct a survey of all bulk materials handling, construction, and industrial activities at the facility for the potential of airborne particulate matter in accordance with the procedures listed in 40 CFR §60, Appendix A, RM 22;
    - (ii) Initiate corrective actions, within 2 days of discovering that particulate matter emissions are leaving the property at a level which potentially could unreasonably interfere with the enjoyment of life or property, be injurious to human health or welfare, animal or plant life, or property;
    - (iii) Keep contemporaneous records of all visual surveys performed and corrective actions taken to prevent particulate matter emissions from leaving the property. Submit summaries of the records with the report required by condition 27 of this permit;
    - (iv) Report per Condition 26 whenever a visual survey reveals that particulate matter emissions at levels specified in Condition 4.1c(ii) are leaving the property.
  - d. The Permittee shall:
    - (i) For any credible dust complaints received, relating to fugitive emissions that emanate past the ambient air quality boundary and that are directly attributable to their operations or activities, the Permittee shall review its fugitive dust plan, and make revisions as necessary or practicable to mitigate future events through addressing the source of the dust causing the complaint.
    - (ii) If instructed by the Department, review its fugitive dust plan, and make any revisions, as necessary or practicable, to mitigate future dust events through addressing the source of the dust.
5. **Ambient Monitoring for Ambient Protection.** The Permittee shall establish ambient PM-10 and meteorological monitoring as follows.
- 5.1 Within 60 days of permit issuance, the Permittee shall propose, for Department for approval,
- a. a location for the PM-10 monitor that best characterizes the ambient impacts from their mine emissions, and
  - b. a location for measuring representative meteorological conditions at the proposed PM-10 monitoring station.

- 5.2 Within 30 days of the Department’s approval of the PM-10 and meteorological monitoring locations, the Permittee shall submit for Department approval, a Quality Assurance Project Plan (QAPP) for their PM-10 and meteorological monitoring effort. The QAPP shall describe the procedures that the Permittee intends to use in order to:
  - a. Collect data that complies with 18 AAC 50.215(a);
  - b. Obtain PM-10 data that meets the 75 percent data capture requirement under the State/Local Ambient Monitoring (SLAM) criteria; and
  - c. Obtain meteorological data that meets the quality assurance requirements of the Prevention of Significant Deterioration (PSD) program.
- 5.3 The Permittee shall initiate their monitoring program within 60 days of the QAPP approval date, or a subsequent date approved in writing by the Department in advance of the 60-day deadline.
- 5.4 The Permittee shall install and operate a meteorological tower of at least 3 meters in height, that measures:
  - a. wind speed;
  - b. wind direction; and
  - c. ambient temperature.
- 5.5 The Permittee shall collect continuous PM-10 data using a federal equivalent method (FEM) as follows:
  - a. Monitoring shall occur year-round, unless otherwise approved in writing by the Department;
  - b. Upon written Department approval, The Permittee may suspend monitoring during extended periods of inactivity of the stationary source, or in other situations that would lead to near-background conditions;
  - c. If PM-10 monitoring is suspended due to inactivity of the stationary source,
    - (i) The Permittee shall notify the Department in writing of their intent to restart their mining operations – the notice shall be provided at least 10 business days prior to restarting their operations; and
    - (ii) The Permittee shall restart their PM-10 monitoring upon restarting their mining operations;
  - d. The Permittee shall collect at least three years of PM-10 and meteorological data, excluding any periods of inactivity.
    - (i) After this period has elapsed, the Permittee may seek written Department approval to stop monitoring if the measured PM-10 impacts during the previous year are less than two-thirds of the 24-hour PM-10 Alaska Ambient Air Quality Standards (AAAQS).

- (ii) The Department may refuse a request to cease monitoring if:
    - (A) the PM-10 impacts are unusually low (compared to the previous years of monitoring data),
    - (B) there were substantive periods of inactivity at the stationary source during the year, or
    - (C) The Permittee is planning any increases to the production capacity at the mine.
  - (iii) For purposes of this condition, the Permittee need not compare impacts approved by the Department as an exceptional event (e.g., wildfire impacts) to the two-third threshold.
- 5.6 The Permittee shall post their PM-10 monitoring data on a publicly accessible web site on a near real-time basis.
- 5.7 The Permittee shall also make quarterly summaries publicly available as follows:
- a. The quarterly summaries shall report the top twenty (20) highest 24-hour PM-10 concentrations measured during the quarter and the previous 12-month period.
  - b. The summaries shall note whether an audit or calibration occurred during the quarter, and whether the Permittee is complying with their QAPP.
  - c. Within 30 days of the end of the quarter, the quarterly summaries shall be available for public review on a publicly assessable web site,
  - d. The Permittee shall maintain all Quarterly summaries on the website for at least one year.
- 5.8 The Permittee shall submit annual monitoring reports of their PM-10 and meteorological monitoring effort for Department review and approval as follows:
- a. The monitoring reports shall be submitted no later than 60-days after a 12-month monitoring period ends, and
  - b. The annual monitoring reports shall be available for public review on a publicly assessable web site.

***Section 3. Owner Requested Limitation on Possible Operating Scenarios to Avoid PSD Classification***

6. The Permittee shall not use thermal dryers in the preparation of the coal.
  - 6.1 In each operating report required under Condition 27, the Permittee shall report, for that reporting period, if the Permittee used thermal dryers in the preparation of the coal.

#### ***Section 4. Emission Fees***

7. **Assessable Emissions.** The Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of
  - 7.1 the stationary source's assessable potential to emit of 68 tpy; or
  - 7.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by
    - a. an enforceable test method described in 18 AAC 50.220;
    - b. material balance calculations;
    - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
    - d. other methods and calculations approved by the Department.
8. **Assessable Emission Estimates.** Emission fees will be assessed as follows:
  - 8.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Suite 303, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
  - 8.2 if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 7.1.

## ***Section 5. State Emissions Standards***

### **Visible Emissions Standards**

9. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU ID(s) 1, 2 and 12 listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.
  - 9.1 For EU IDs 1 and 2, conduct an initial Method 9 compliance demonstration within 30 days of startup of that emission unit.
  - 9.2 For EU ID 1, monitor record and report in accordance with Conditions 10, 12 and 13.
  - 9.3 For EU ID 12, monitor record and report in accordance with Conditions 11, 12 and 13.

### *Liquid Fuel-Fired Emission Units (EU ID 1)*

10. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of EU ID 1 for visible emissions using either the Method 9 Plan under Condition 10.1 or the Smoke/No-Smoke Plan under Condition 10.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by Condition 10.3.
  - 10.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.
    - a. First Method 9 Observation. For EU ID 1, observe exhaust for 18 minutes within six months after the initial startup of the unit. For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 10.2. For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.
    - b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.
    - c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under Condition 9.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations at least semiannually. Semiannual observations must be taken between four and seven months after the previous set of observations.
    - d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations at least annually.

Annual observations must be taken between 10 and 13 operating months after the previous observations.

- e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals, until the criteria in Condition 9.1c for semiannual monitoring are met.

10.2 **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.
- b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.
- c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of Condition 10.1 or perform the corrective action required under Condition 10.3

10.3 **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 10.2, then the Permittee shall either follow the Method 9 plan of Condition 10.1 or

- a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;
- b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and
- c. after completing the actions required under Condition 9.1a,
  - (i) take Smoke/No Smoke observations in accordance with Condition 10.2.
    - (A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and
    - (B) continue as described in Condition 9.1b; or

- (ii) if the actions taken under Condition 9.1a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition 9.1c(i)(A)1.1.c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 9.1a.
11. **Rock Crusher Visible Emissions Monitoring.** For EU ID 12, the Permittee shall inspect each emission point capable of producing fugitive emissions and observe each emission point producing fugitive emissions for visible emissions in accordance with 40 C.F.R. 60, Appendix A, Method 9 for a minimum of 18 consecutive minutes.
- 11.1 Emission points capable of producing fugitive emissions.
  - 11.2 The Permittee shall perform visible emissions observations:
    - a. when the Rock Crusher is operating at loads typical of normal operations;
    - b. within two days of startup at a new location;
    - c. at least once during a 14-day operating period at the same location; and
    - d. within 24 hours following the startup of the Rock Crusher after a shut down period of more than five days.
12. **Visible Emissions Recordkeeping.** The Permittee shall keep records as follows:
- 12.1 When using the Method 9 Plan in Condition 10.1 or 11,
    - a. the observer shall record
      - (i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Attachment 2 – Visible Emissions Form;
      - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
      - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
      - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation record in Attachment 2 – Visible Emissions Form, and

- (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.
  - b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.
  - c. Calculate and record the highest 18-consecutive-minute averages observed.
- 12.2 If using the Smoke/No Smoke Plan of Condition 10.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:
- a. the date and time of the observation;
  - b. from Table 1, the ID of the emission unit observed;
  - c. whether visible emissions are present or absent in the exhaust;
  - d. a description of the background to the exhaust during the observation;
  - e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;
  - f. name and title of the person making the observation; and
  - g. operating rate (load or fuel consumption rate).
13. **Visible Emissions Reporting.** The Permittee shall report visible emissions as follows:
- 13.1 Include in each stationary source operating report under Condition 27, include for the period covered by the report:
- a. which visible-emissions plan of Condition 10.1 or 11 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;
  - b. for each emission unit under the Method 9 Plan,
    - (i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
    - (ii) a summary to include:
      - (A) number of days observations were made;
      - (B) highest six-minute average observed; and
      - (C) dates when one or more observed six-minute averages were greater than 20 percent;

- c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and
  - d. a summary of any monitoring or recordkeeping required under Conditions 10 and 12 that was not done;
- 13.2 Report under Condition 19:
- a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and
  - b. if any monitoring under Condition 10 was not performed when required, report within three days of the date the monitoring was required.

### **Particulate Matter Emissions Standards**

14. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU ID 1 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

14.1 For EU ID 1, monitor, record and report in accordance with Conditions 15 - 20.

### **PM Monitoring, Recordkeeping and Reporting**

#### *Liquid Fuel-Fired Engines (EU ID(s) 1)*

15. **Particulate Matter Monitoring for Diesel Engines.** The Permittee shall conduct source tests on diesel engines and liquid fuel-fired turbines, EU ID 1, to determine the concentration of particulate matter (PM) in the exhaust of an emission unit in accordance with this Condition 15.

15.1 Except as provided in Condition 15.4 within six months of exceeding the criteria of Conditions 1.1.a or 1.1.b, either

- a. conduct a PM source test according to requirements set out in Section 7; or
- b. make repairs so that emissions no longer exceed the criteria of Condition 15.2; to show that emissions are below those criteria, observe emissions as described in Condition 10.1 under load conditions comparable to those when the criteria were exceeded.

15.2 Conduct the PM test or make repairs according to Condition 15.1 if

- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
- b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

- 15.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest average 6-minute opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 15.4 The automatic PM source test requirement in Conditions 15.1 and 15.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.
16. **Particulate Matter Recordkeeping for Diesel Engines.** Within 180 calendar days after the initial startup of EU ID 1, the Permittee shall record the exhaust stack diameter(s) of EU ID1. Report the stack diameter(s) in the next operating report under Condition 27.
17. **Particulate Matter Reporting for Diesel Engines.** The Permittee shall report as follows:
  - 17.1 Report under Condition 19
    - a. the results of any PM source test that exceeds the PM emissions limit; or
    - b. if one of the criteria of Condition 15.2 was exceeded and the Permittee did not comply with either Condition 9.1a or 9.1b, this must be reported by the day following the day compliance with Condition 15.1 was required;
  - 17.2 Report observations in excess of the threshold of Condition 9.1b within 30 days of the end of the month in which the observations occur;
  - 17.3 In each operating report under Condition 27, include for the period covered by the report:
    - a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 15.2;
    - b. a summary of the results of any PM testing under Condition 15; and
    - c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 15.2, if they were not already submitted.

*For Liquid Fuel-Fired Boilers and Heaters (EU ID 2)*

18. **Particulate Matter Monitoring for Liquid Fuel-Fired Boilers and Heaters.** The Permittee shall conduct source tests on EU ID(s) 2 to determine the concentration of PM in the exhaust of EU ID(s) 2 as follows:
  - 18.1 Conduct a PM source test according to the requirements set out in Section 7 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20 percent opacity threshold for two or more 18-minute observations in a consecutive six-month period.
  - 18.2 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run.

- 18.3 The PM source test requirement in Condition 18 is waived for an emission unit if:
- a. PM source test during the most recent semiannual reporting period on that unit shows compliance with the PM standard since permit issuance, or
  - b. if a follow-up visible emission observation conducted using Method-9 during the 90 days shows that the excess visible emissions described in Condition 1.1.e no longer occur.
19. **Particulate Matter Recordkeeping for Liquid Fuel-Fired Boilers and Heaters.** The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Condition 18.
20. **Particulate Matter Reporting for Liquid Fuel-Fired Boilers and Heaters.** The Permittee shall report as follows:
- 20.1 In each operating report required by Condition 27, include
- a. the dates, EU ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in Condition 1.1.e.
  - b. a summary of the results of any PM testing and visible emissions observations conducted under Condition 18.
- 20.2 Report as excess emissions, in accordance with Condition 19, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 14.

### **Sulfur Compound Emission Standards Requirements**

21. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from EU ID(s) 1 and 2 to exceed 500 ppm averaged over three hours.
- 21.1 For Fuel Oil 1(EU ID(s) 1 and 2), the Permittee shall do one of the following for each shipment of fuel:
- a. If the fuel grade requires a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount; or
  - b. If the fuel grade does not require a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount and
    - (i) test the fuel for sulfur content; or
    - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.

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<sup>1</sup> Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil, as defined in 40 C.F.R. 60.41b, effective 7/1/07.

- 21.2 Fuel testing under Condition 21.1 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) and 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- 21.3 If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO<sub>2</sub> emissions in ppm using either Attachment 1 – Material Balance Calculation or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).
- 21.4 The Permittee shall report as follows:
  - a. If SO<sub>2</sub> emissions calculated under Condition 21.3 exceed 500 ppm, the Permittee shall report under Condition 19. When reporting under this condition, include the calculation under Attachment 1 – Material Balance Calculation.
  - b. The Permittee shall include in the report required by Condition 27
    - (i) a list of the fuel grades received at the stationary source during the reporting period;
    - (ii) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and
    - (iii) for fuel with a sulfur content greater than 0.75 percent, the calculated SO<sub>2</sub> emissions in ppm.

## ***Section 6. General Recordkeeping Requirements***

22. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
- 22.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
  - 22.2 records of all monitoring required by this permit, and information about the monitoring including:
    - a. the date, place, and time of sampling or measurements;
    - b. the date(s) analyses were performed;
    - c. the company or entity that performed the analyses;
    - d. the analytical techniques or methods used;
    - e. the results of such analyses; and,
    - f. the operating conditions as existing at the time of sampling or measurement.
23. **Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.” Excess emission reports must be certified, either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
- 23.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
    - a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
    - b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 23.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.
24. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

25. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send an original and one copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 22.
26. **Excess Emissions and Permit Deviation Reports.**
- 26.1 The Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:
- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
    - (i) emissions that present a potential threat to human health or safety; and
    - (ii) excess emissions that the Permittee believes to be unavoidable;
  - b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;
  - c. report all other excess emissions and permit deviations
    - (i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in Conditions 26.1c(ii) and 26.1c(iii);
    - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 26.1c(i); and
    - (iii) for failure to monitor, as required in other applicable conditions of this permit.
- 26.2 The Permittee must report using either the Department’s on-line form, or if the Permittee prefers, the form contained in Section 11 of this permit. The Permittee must provide all information called for by the form that is used.
- 26.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.
27. **Operating Reports.** During the life of this permit, the Permittee shall submit to the Department an original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year, and by February 1 for the period July 1 to December 31 of the previous year.
- 27.1 The operating report must include all information required to be in operating reports by other conditions of this permit.
- 27.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 27.1, either

- a. The Permittee shall identify
    - (i) the date of the deviation;
    - (ii) the equipment involved;
    - (iii) the permit condition affected;
    - (iv) a description of the excess emissions or permit deviation; and
    - (v) any corrective action or preventive measures taken and the date of such actions; or
  - b. When excess emissions or permit deviations have already been reported under Condition 26, the Permittee may cite the date or dates of those reports.
- 27.3 Include in the report any NSPS reports submitted to the EPA for the current operating period.
28. **Periodic Affirmation:** Each year by March 31, the Permittee shall submit to the Department an original and one copy of a written affirmation stating:
- 28.1 Whether the stationary source is still accurately described by the application and minor permit, and
  - 28.2 Whether the owner or operator has made changes that would trigger the requirement for a new permit under 18 AAC 50.
  - 28.3 The Permittee, at their discretion, may submit one copy in electronic format (PDF or other Department compatible image format).

### ***Section 7. General Source Test and Monitoring Requirements***

29. **Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.
30. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department’s appropriate division director or designee.
31. **Test Plans.** Except as provided in Condition 37, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 29 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.
32. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing as follows:
  - 32.1 at a point or points that characterize the actual discharge into the ambient air; and
  - 32.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.
33. **Reference Test Methods.** The Permittee shall use the following references for test methods when conducting source testing for compliance with this permit:
  - 33.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 2 of this permit to record data.
  - 33.2 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.
  - 33.3 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.
  - 33.4 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

34. **Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).
35. **Test Notification.** Except as provided in Condition 37, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.
36. **Test Reports.** Except as provided in Condition 37, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 22. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period than specified by the Department.
37. **Test Exemption.** The Permittee is not required to comply with Conditions 31, 35, and 36 (Test Plans, Test Notification and Test Reports) when exhaust is observed for visible emissions using Method 9.
38. **Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Condition 14, the three-hour average is determined using the average of three one-hour test runs.

### ***Section 8. Compliance Requirements***

39. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to
  - 39.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
  - 39.2 have access to and copy any records required by the permit;
  - 39.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
  - 39.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.
40. **Good Air Pollution Control Practice.** The Permittee shall do the following for all fuel burning equipment contained in Table 1:
  - 40.1 perform regular maintenance as require by either the manufacturer’s or the Permittee’s established written maintenance procedures.
  - 40.2 maintain a copy of the maintenance procedures for each piece of equipment listed in Table 1, in an easily accessible place for use during maintenance as well as it should be readily available for inspection by the Department.
  - 40.3 maintain copies of all maintenance records, where the maintenance may have an effect on the emissions of a given emission unit, per the requirements of Condition 22.
41. **Monitoring Equipment:** For any piece of monitoring equipment required by this permit the Permittee shall:
  - 41.1 Install, Operate and Maintain the monitoring equipment by either the manufacturer’s or the Permittee’s established written procedures.
  - 41.2 Maintain a copy of the procedures for each piece of monitoring equipment required by this permit, in an easily accessible place for use during maintenance as well as it should be readily available for inspection by the Department.
  - 41.3 Maintain copies of all installation and maintenance records, per the requirements of Condition 22.

### ***Section 9. Standard Permit Conditions***

42. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
  - 42.1 an enforcement action; or
  - 42.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
43. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
44. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
45. Compliance with permit terms and conditions is considered to be compliance with those requirements that are
  - 45.1 included and specifically identified in the permit; or
  - 45.2 determined in writing in the permit to be inapplicable.
46. The permit may be modified, reopened, revoked, and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
47. The permit does not convey any property rights of any sort, nor any exclusive privilege.

***Section 10. Permit Documentation***

<u>Date</u>	<u>Action</u>
June 3, 2010	Application Received
June 3, 2010	Fee Clarification Request
June 28, 2010	Request to Proceed Received
August 2, 2010	Request for Enhanced Dust Control Plan Sent
August 9, 2010	New Dust Control Plan Received

**Section 11. Attachments**

**Attachment 1 – Material Balance Calculation**

If the sulfur content of a fuel shipment is greater than 0.75 percent by weight, calculate the three-hour exhaust concentration of SO<sub>2</sub> using the following equations:

$$\begin{aligned}
 \text{A.} &= 31,200 \times [\text{wt}\% \mathbf{S}_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{B.} &= 0.148 \times [\text{wt}\% \mathbf{S}_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{C.} &= 0.396 \times [\text{wt}\% \mathbf{C}_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{D.} &= 0.933 \times [\text{wt}\% \mathbf{H}_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{E.} &= \text{B} + \text{C} + \text{D} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{F.} &= 21 - [\text{vol}\%_{\text{dry}} \mathbf{O}_2, \text{ exhaust}] = 21 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{G.} &= [\text{vol}\%_{\text{dry}} \mathbf{O}_2, \text{ exhaust}] \div \text{F} = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{H.} &= 1 + \text{G} = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{I.} &= \text{E} \times \text{H} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{SO}_2 \text{ concentration} &= \text{A} \div \text{I} = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ppm}
 \end{aligned}$$

The wt% S<sub>fuel</sub>, wt% C<sub>fuel</sub>, and wt% H<sub>fuel</sub> are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 21.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%<sub>dry</sub>O<sub>2</sub>, exhaust) is obtained from oxygen meters, manufacturer’s data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if wt% S<sub>fuel</sub> = 1.0%, then enter 1.0 into the equations not 0.01 and if vol%<sub>dry</sub>O<sub>2</sub>, exhaust = 3.00%, then enter 3.00, not 0.03.

## Attachment 2 – Visible Emissions Form

### Visible Emissions Field Data Sheet

Certified Observer: \_\_\_\_\_

Company &  
 Stationary  
 Source: \_\_\_\_\_

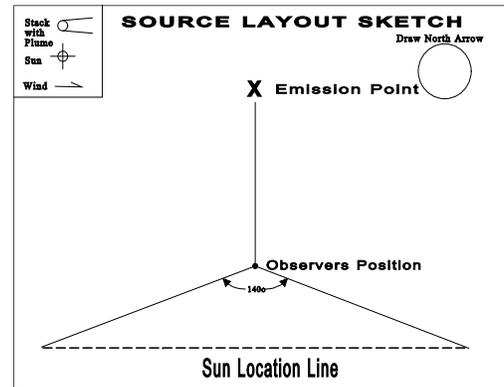
Location: \_\_\_\_\_

Test No.: \_\_\_\_\_ Date: \_\_\_\_\_

Source: \_\_\_\_\_  
 Production Rate/Operating  
 Rate: \_\_\_\_\_

Unit Operating Hours: \_\_\_\_\_

Hrs. of observation: \_\_\_\_\_



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					



## Attachment 3 – ADEC Notification Form<sup>2</sup>

Stationary Source (Facility) Name \_\_\_\_\_

Air Quality Permit Number \_\_\_\_\_

Company Name \_\_\_\_\_

When did you discover the Excess Emissions/Permit Deviation?

Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Time: \_\_\_\_\_ : \_\_\_\_\_

When did the event/deviation occur?

Begin Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Time: \_\_\_\_\_ : \_\_\_\_\_ (please use 24hr clock)  
 End Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Time: \_\_\_\_\_ : \_\_\_\_\_ (please use 24hr clock)

What was the duration of the event/deviation?: \_\_\_\_\_ : \_\_\_\_\_ (hrs:min) or \_\_\_\_\_ days  
 (total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

- Excess Emissions - Complete Section 1 and Certify.
- Deviation from Permit Condition - Complete Section 2 and Certify
- Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

### Section 1. Excess Emissions

(a) Was the exceedance:  Intermittent  Continuous

(b) Cause of Event (Check one that applies):

- Start Up /Shut Down  Natural Cause (weather/earthquake/flood)
- Control Equipment Failure  Scheduled Maintenance/Equipment Adjustment
- Bad fuel/coal/gas  Upset Condition  Other \_\_\_\_\_

(c) Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

Unit ID	Emission Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

<sup>2</sup> Revised as of August 20, 2008.

(e) Type of Incident (Please Check only one).

- Opacity \_\_\_\_\_ %     
  Venting \_\_\_\_\_ (gas/scf)     
  Control Equipment Down  
 Fugitive Emissions     
  Emission Limit Exceeded     
  Other:  
 Marine Vessel Opacity     
  Flaring

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?       Yes       No

Do you intend to assert the affirmative defense of 18 AAC 50.235?       Yes       No

Certify Report (go to end of form)

**Section 2 Permit Deviations**

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit).

- Source Specific  
 Failure to monitor/report  
 General Source Test/Monitoring Requirements  
 Recordkeeping/Reporting/Compliance Certification  
 Standard Conditions Not Included in Permit  
 Generally Applicable Requirements  
 Reporting/Monitoring for Diesel Engines  
 Record Keeping Failure  
 Insignificant Source  
 Facility Wide  
 Other Section \_\_\_\_\_ (title of section and section number of your permit).

(b) Emission Unit Involved.

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

(c) Description of Potential Deviation:

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Unit ID	Emission Unit Name	Permit Condition / Potential Deviation

**Certification:**

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

**NOTE:** *This document must be certified in accordance with 18 AAC 50.345(j)*

**To Submit this Report:**

1. Fax to: 907-451-2187;

Or

2. Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov) - *if faxed or emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 27.*

Or

3. Mail to:       ADEC  
                  Air Permits Program  
                  610 University Avenue  
                  Fairbanks, AK 99709-3643

Or

4. Phone Notification: 907-451-5173

*Phone notifications require a written follow-up report.*

Or

5. Submission of information contained in this report can be made electronically at the following website:

<https://myalaska.state.ak.us/dec/air/airtoolsweb/>

*if submitted online, report must be submitted by an authorized E-Signer for the Stationary Source.*

## **Attachment 4 – Fugitive Dust Control Plan**

### **Usibelli Coal Mine, Inc.** **Wishbone Hill Coal Mining and Processing Operation** **Fugitive Dust Control Plan**

#### **Active Controls for Fugitive Emission Sources**

Total emission rates associated with the mining operations are predominantly fugitive derived particulate matter (PM<sub>10</sub>) emissions. The bulk of these emissions are associated with:

- 1) Wind erosion from the exposed mine area,
- 2) Topsoil removal operations, and
- 3) Roads.

To mitigate the production of fugitive emissions from the exposed mine area, the mining and reclamation plan has been specifically designed to limit the amount of pre-stripping that is done in advance of the active operations. Only the minimum amount of area required to maintain the active pit will be exposed at any given time. In addition, the truck/shovel mining method will utilize an immediate haul back system that will promote contemporaneous reclamation and minimize the size of the active disturbance area. Through progressive backfilling, grading, topsoiling and prompt revegetation, the amount of disturbed area potentially subject to wind erosion will be minimized. Active overburden material will be placed on previously mined out areas as opposed to stockpiling the material on adjacent undisturbed areas. Topsoil will be immediately placed on the regarded areas and various planting methods will be employed to encourage the rapid establishment of vegetative cover on exposed areas. These methods will include hydroseeding select areas, applying fertilizer to stimulate growth, establishing temporary vegetative cover on stockpiles, transplanting mats of native vegetation, hand planting cuttings and seedlings and utilizing special designed mixes of grass species to achieve the optimal growth patterns. Seeding and planting of disturbed areas will be conducted during the first normal period for favorable planting conditions after replacement of the topsoil material.

The primary control for topsoil stripping will be timing and immediate stabilization. Advanced mine planning will be done to allow stripping operations to be completed as early as possible in the growing season and thus take advantage of the higher soil moisture content. In addition to reducing fugitive dust emissions, early timing will facilitate revegetation work and the stabilization of the topsoil stockpiles and reclaimed areas.

For the modeled compliance demonstration with the AAAQS, watering was the only control factor that was applied to roads. However, for this operational dust control plan, enhanced techniques will be used for the control of particulate matter emissions from the mine access road and all permanent mine roads. These techniques will include the use of Alaska Department of Environmental Conservation (ADEC) approved dust palliatives such as calcium chloride, or a similar dust control agent, along with water. Each calendar year, as soon as road and weather conditions allow, but in no case later than June 15, the dust palliative will be applied in accordance with the manufacturer's specifications. The ongoing maintenance work required to maintain the effectiveness of the product will also follow the manufacturer's recommendations.

In addition to above procedures, the roads will be reassessed before freeze-up each year and any required maintenance needed to maintain the roads through the winter months will be performed.

### Monitoring

To evaluate the effectiveness of the road dust control plan discussed above, the following monitoring procedures will be implemented. Each day on which mining occurs and the road surface is not frozen or does not exhibit visible surface moisture, the duration of particulate matter emissions resulting from road traffic will be determined as follows:

- Reference Method 22, specified in 40 Code of Federal Regulations (CFR) 60, Appendix A-7, will be used to monitor fugitive emissions from the roads;
- The vehicle type will be recorded for each reading;
- Observations will be initiated at the time the observed vehicle passes the observer; and
- Observations will continue until that vehicle's emissions have completely dissipated.

If the duration of the particulate matter emission is greater than two minutes, additional water and/or a dust palliative will be applied to the road surface to reduce the particulate matter emissions as soon as practicable. After the application of additional water and/or a dust palliative, the road emissions will be reassessed using the procedures outline above.

To maintain the most optimal dust control plan for the mining operations, the operator may periodically modify the plan or make changes to the monitoring procedures. Prior to making any modifications or changes to this plan, the operator will obtain written approval from ADEC. The request for ADEC approval will be submitted to the agency at least 30 days prior to implementing the planned changes. It will be assumed that the request has been approved if no response is received from ADEC in 30 days.

## Attachment 5 – Complaint Form

Date

Time:

Activities Involved:

Provide a description of reported complaint. Attach sheets as necessary.

If applicable, operational conditions which contributed to the complaint:

If applicable, ambient conditions which contributed to the complaint:

If applicable, describe measures taken to immediately address the complaint.

If applicable, describe measures taken to address preventing the condition which generated the complaint.

If applicable, describe any reason that you feel the complaint may not be a violation:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate and complete.

Printed Name

Signature

Date

## **Attachment 6: Public Access Control Plan**

**Usibelli Coal Mine**  
**Wishbone Hill Coal Mining and Processing Operation**  
**Public Access Control Plan**

### **Purpose**

The purpose of this document is to describe the Public Access Control Plan that will be used to protect the general public from health and safety hazards incident to the industrial activities planned at the Wishbone Hill Coal Mining and Processing Operation (Wishbone Hill). Usibelli Coal Mine Inc. (Usibelli) proposes to mine the western end of the Wishbone Hill coal district on the southwestern extent of Wishbone Hill. The permitted area for the project is located on lands leased from the State of Alaska and the Matanuska Susitna Borough and also on land owned by Usibelli. This plan describes the access control plan that will be used to implement the access restrictions.

Usibelli is fully committed to meeting the applicable Alaska Ambient Air Quality Standards (AAAQS) at the ambient air quality boundary of the project. A primary purpose of this plan is to delineate the area to be protected and controlled for occupational health and safety (within the ambient air quality boundary) from the area that is subject to unrestricted, general public access where the AAAQS are applicable (outside the ambient air quality boundary). A secondary purpose is to ensure that measures are in place to restrict public access within the ambient air quality boundary.

### **General Information**

Usibelli coal mining operations will be conducted on the western end of the Wishbone Hill coal district on the southwestern extent of Wishbone Hill. Currently, access to the property is by a gravel road from the Glenn Highway. The nearest community to the site is Palmer, which is located approximately eight miles to the southwest.

Dispersion modeling has been conducted and demonstrates modeled compliance with all applicable AAAQS at all points on and outside of the ambient air quality boundary.

### **Public Access Control Measures**

#### **Physical Barriers**

The land within the ambient air quality boundary encompasses approximately 1,285 acres. (See Plate 1). At the Glenn Highway intersection, public access on this road will be controlled by an automated gate. Where public right-of-way 52715 crosses the mine access road south of the

facilities area, a set of automated gates will be placed on each side of the crossing. Controlled access at the crossing will be maintained with either 4 way stop signs or a large diameter culvert under the access road.

Security fencing will also be constructed around the facilities area and at the west end of Mine Area 1 (See Plate 1). The fencing will be periodically marked with identification and no trespassing signs.

### Posting

In addition to the physical barriers cited above, public access to the site will be restricted using strategically located signs. Signs restricting public access and warning of potential health hazards will be posted at intersection of the Glenn Highway and the mine access road, the intersection of public right-of-way 52715 and the mine access road, and approximately every 800 yards along the ambient air quality boundary. The sign specifications will be as follows:

- Each sign will be 2 feet by 4 feet and will be mounted on posts.
- Each sign will be inspected semi-annually and will be repaired or replaced, as necessary.
- Each sign will be free of visible obstructions.
- Each sign will read:

<p style="text-align: center;"><b>DANGER</b></p> <p style="text-align: center;"><b>RESTRICTED ACCESS</b> <b>AMBIENT AIR QUALITY BOUNDARY</b> <b>AUTHORIZED PERSONNEL ONLY</b> <b>PLEASE CHECK IN WITH SECURITY</b></p>
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### Proposed Surveillance

For all operations, all on-site personnel will be informed of the air permitting requirements to maintain an exclusion zone at the location. All personnel will be asked to observe the location perimeter as they conduct their regular duties. Any suspected violation of the exclusion zone by unauthorized personnel will be immediately reported to mine management.

Mine personnel will periodically observe the perimeter of the facilities area. If unauthorized people are observed, a log of the time and date of the observation will be recorded on the

attached form. A record of the completed logs will be maintained on location in the Wishbone Hill Mine office.

#### Trespass Individuals

If a mine employee observes unauthorized personnel within the ambient air quality boundary, appropriate measures will be taken by the employee to address potential health and safety concerns. If safety is not of immediate concern, mine employees will be instructed to use the following protocol when dealing with unauthorized entry. A log of the incidence will be recorded on the attached form and filed at the mine office for future reference.

- Approach the unauthorized person (or persons) and request that they leave the area immediately.
- If the unauthorized individual(s) refuse to leave the area after the above request, the individual(s) will be informed that they are in an area in which the AAAQS may not be met and that State regulations require Usibelli to restrict entry to the posted area to authorized personnel only. The unauthorized person or persons will again be asked to leave the exclusion zone area.
- If the unauthorized individual(s) still refuse to leave, the individual(s) will be informed that Usibelli will not be liable or responsible for any harm they may encounter by being in a restricted entry area.
- The mine personnel will also request the name or names of the unauthorized personnel at that time. The mine individual will then log the encounter with the unauthorized person or persons on the surveillance form. The data to be logged in such a situation will include:
  1. Day and time;
  2. The name of the individual(s) (if known or otherwise provided);
  3. The method of entry into the property (e.g. by foot, snow machine, etc.);
  4. Duration of unauthorized presence within the ambient air boundary; and
  5. Other pertinent information as appropriate.

The mine individual will also report such incidents to mine management.



**PLATE 1**  
**MINE AREA 1 & 2 AMBIENT AIR QUALITY BOUNDARY**

